

# Standards of Public Land Health

## Evaluation of 64050 MILNER LAKE Allotment

### [ 09/16/2010 ]

The Roswell Field Office conducted rangeland health assessments at 5 study sites within 64050 MILNER LAKE. The assessments looked at the Soil/Site Stability, Hydrologic Function and Biotic Integrity indicators within the vicinity of each study site. Existing monitoring data was incorporated into and in support of the field assessment. The summary of each assessment is attached and shown in the following table.

Study Area or Assessment Area	UPLAND			BIOTIC			RIPARIAN		
	Meets	Monitor an Indicator	Does Not Meet	Meets	Monitor an Indicator	Does Not Meet	Meets	Monitor an Indicator	Does Not Meet
64050-#3-F190	X			X			N/A		
64050-N EVERETT #1-F188 (*)	X			X			N/A		
64050-S EVERETT #2-F189	X			X			N/A		
64050-S EVERETT #3-N012	X			X			N/A		
64050-W EVERETT-N011 (*)	X			X			N/A		

The (\*) indicates that the assessment had one or more indicator(s) rated moderate/extreme or extreme. These indicators are:

- Functional/Structural Groups
- Invasive Plants

These indicators by themselves are not enough to rate the site as not meeting a standard but may warrant future monitoring.

Twenty-two (22) indicators for Rangeland Health were evaluated for public land on Milner Lake, allotment #64050. Ten of these assessed soil site stability, 11 hydrologic function and 13 biotic integrity. These qualitative assessments in conjunction with quantitative information gathered from previous data collected on 6 trend plot locations within this allotment were utilized to make rangeland health determinations. Quantitative evaluations are performed by the Roswell Field

Office, which include some or all of the following: ground and vegetative cover and composition, production, frequency and ecological condition. These collections which were initiated in the late 1970's/early 1980's, are scheduled and conducted approximately every 5 years.

This allotment contains 4,775 acres of public land. The studies are located on one Loamy SD-3 site, one Gyp Upland SD-3 site, two Bottomland SD-3 sites and a Sandy SD-3 ecological site. The majority of the indicators were rated as “None to Slight” or “Slight to Moderate” degree of departure from the ecological site description. There are no riparian areas on the public land in this allotment. At each of the study locations, the indicator for Invasive Plants while rated as “Slight to Moderate” to “Moderate to Extreme due to the amount or encroaching mesquite, the team noted the level of mesquite or salt cedar. Mesquite has been treated in 1997 utilizing an herbicide application, however, a prescribed burn was not implemented and there are many standing dead plants still evident.

**Recommendations:** With the majority of the indicators falling in the “None to Slight” or “Slight to Moderate” category, this allotment is rated as “Meeting” the standard for Rangeland Health. Continue the rangeland monitoring studies to insure proper stocking rates are maintained and that the perennial grass cover and good plant composition remains. **The team strongly recommends that the entire allotment be mapped for mesquite and if feasible to implement a land treatment.** Due to the intermingled land status, the team also recommends that coordination be done with other entities, such as the Natural Resource Conservation Service and the Soil and Water Conservation District, and the New Mexico State Land Office to complete the treatment across private, state leased lands and public lands.

## RFOs Upland and Biotic Standard Assessment Summary Worksheet

### SITE 64050-#3-F190

Legal Land Desc	SWSE 29 0070S 0260E Meridian 13	Acreage	912
Ecosite	042CY006NM GYP UPLAND SD-3	Photo Taken	Y
Watershed	13060003220 FILLMORE		
Observers	TRAUTNER, MCGEE	Observation Date	09/02/2010
County Soil Survey	NM644 CHAVES NORTH	Soil Var/Taxad	
Soil Map Unit	HKD	Soil Taxon Name	HOLLOMEX
Texture Class	NM644 L	Soil Phase	HOLLOMEX- GYPSUM LND- ALAMA
Texture Modifier	NM644 LOAM		
Observed Avg Annual Precipitation		Observed Avg Growing Season Precipitation	
NOAA Annual Precipitation		NOAA Growing Season Precipitation	
NOAA Avg Annual Precipitation		NOAA Avg Growing Season Precipitation	
Disturbances and Animal Use:	Cattle use present, Oil & Gas development		

### Part 2. Attributes and Indicators

		Departure from Ecological Site Description/Ecological Reference Areas				
Attribute	Indicators	Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
S H	Rills					X
Comments:						
S H	Water Flow Patterns					X
Comments:						
S H	Pedestals and/or Terracettes				X	
Comments:		some roots almost exposed				
S H	Bare Ground					X
Comments:						

S H	Gullies					X
Comments:						
S	Wind-scoured, Blowouts, and/or Deposition Areas					X
Comments:						
H	Litter Movement					X
Comments:						
S H B	Soil Surface Resistance to Erosion					X
Comments:						
S H B	Soil Surface Loss or Degradation					X
Comments:						
H	Plant Community Composition and Distribution Relative to Infiltration and Runoff					X
Comments:						
S H B	Compaction Layer				X	
Comments:	a large number of footprints from "cattle" present					
B	Functional/Structural Groups					X
Comments:						
B	Plant Mortality/Decadence					X
Comments:						
H B	Litter Amount			X		
Comments:	ecological description = 16%, this site= 40%					
B	Annual Production				X	
Comments:	annual production estimated at this site to be approx 500#/acres, ecological site description says 800					
B	Invasive Plants				X	
Comments:	broom snakeweed and mesquite noted here					
B	Reproductive Capability of Perennial Plants					X
Comments:						
S	Physical/Chemical/Biological Crusts					X
Comments:	biological crusts present on majority of gypsic soils					
B	Wildlife Habitat					X
Comments:						

B	Wildlife Populations					X
Comments:						
B	Special Status Species Habitat					
Comments:						
B	Special Status Species Populations					
Comments:						

### Part 3. Summary

A. Indicator Summary - Each of the indicators are associated with one or more of the attributes below. An indicator is placed in a category (columns) above and summed for each of the Standard Attributes.

Standard Attribute		Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
S	Soil	0	0	0	2	8
H	Hydrologic	0	0	1	2	8
B	Biotic	0	0	1	3	7

B. Attribute Summary. In this table, the Extreme and Extreme to Moderate columns in the table above are merged for the *Does not Meet* column, Moderate becomes *May Need More Info*, and Slight to Moderate and None to Slight merge to form the *Meets* columns. Values from the table are summarized below. Space is provided for rationale of the determination. This space should most certainly be used when the determination by the ID team conflicts with the summarized values. Provide the sources of information that lead to the determination. X out the appropriate box for each attribute to denote final agreed upon determination by the ID team.

Attribute	Rationale	Does Not Meet	May Need More Info	Meets
Soil		0	0	10
Hydrologic		0	1	10
Biotic		0	1	10

Site Notes: Species noted here: blue grama, dropseed, bush muhly, 4-wing saltbush, sacaton, annual and perennial forbs, coldenia, tobosa and yucca

RFOs Upland and Biotic Standard Assessment Summary Worksheet			
SITE 64050-N EVERETT #1-F188			
Legal Land Desc	NENE 2 0080S 0250E Meridian 23	Acreage	2335
Ecosite	042CY004NM SANDY SD-3	Photo Taken	Y
Watershed	13060003200 FIVE MILE		
Observers	TRAUTNER & MCGEE	Observation Date	04/01/2010
County Soil Survey	NM644 CHAVES NORTH	Soil Var/Taxad	
Soil Map Unit	DsA	Soil Taxon Name	DONA ANA
Texture Class	NM644 SL	Soil Phase	DONA ANA
Texture Modifier	NM644 SANDY LOAM		
Observed Avg Annual Precipitation		Observed Avg Growing Season Precipitation	
NOAA Annual Precipitation		NOAA Growing Season Precipitation	
NOAA Avg Annual Precipitation		NOAA Avg Growing Season Precipitation	
Disturbances and Animal Use:			

Part 2. Attributes and Indicators						
		Departure from Ecological Site Description/Ecological Reference Areas				
Attribute	Indicators	Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
S H	Rills					X
Comments:						
S H	Water Flow Patterns					X
Comments:						
S H	Pedestals and/or Terracettes				X	
Comments:	some pedestalling					
S H	Bare Ground				X	
Comments:						

S H	Gullies					X
Comments:						
S	Wind-scoured, Blowouts, and/or Deposition Areas			X		
Comments:	mesquite dune influence					
H	Litter Movement			X		
Comments:	increase in litter movement around vegetation					
S H B	Soil Surface Resistance to Erosion				X	
Comments:						
S H B	Soil Surface Loss or Degradation				X	
Comments:						
H	Plant Community Composition and Distribution Relative to Infiltration and Runoff			X		
Comments:	increase in shrub component					
S H B	Compaction Layer					X
Comments:						
B	Functional/Structural Groups		X			
Comments:	a lot of mesquite, no desirable shrubs and few desirable grass species					
B	Plant Mortality/Decadence					X
Comments:						
H B	Litter Amount			X		
Comments:	esd = 35-40%, actual is approx. 25%					
B	Annual Production					X
Comments:	about 900# /acre					
B	Invasive Plants		X			
Comments:						
B	Reproductive Capability of Perennial Plants					X
Comments:						
S	Physical/Chemical/Biological Crusts					X
Comments:	physical and biological crusts present					
B	Wildlife Habitat					X
Comments:						
B	Wildlife Populations					X

Comments:						
B	Special Status Species Habitat					
Comments:						
B	Special Status Species Populations					
Comments:						

### Part 3. Summary

A. Indicator Summary - Each of the indicators are associated with one or more of the attributes below. An indicator is placed in a category (columns) above and summed for each of the Standard Attributes.

Standard Attribute		Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
S	Soil	0	0	1	4	5
H	Hydrologic	0	0	3	4	4
B	Biotic	0	2	1	2	6

B. Attribute Summary. In this table, the Extreme and Extreme to Moderate columns in the table above are merged for the *Does not Meet* column, Moderate becomes *May Need More Info*, and Slight to Moderate and None to Slight merge to form the *Meets* columns. Values from the table are summarized below. Space is provided for rationale of the determination. This space should most certainly be used when the determination by the ID team conflicts with the summarized values. Provide the sources of information that lead to the determination. X out the appropriate box for each attribute to denote final agreed upon determination by the ID team.

Attribute	Rationale	Does Not Meet	May Need More Info	Meets
Soil		0	1	9
Hydrologic		0	3	8
Biotic	This location is adjacent to a mesquite treatment and should have been treated at that time. Implementing a vegetation treatment on the mesquite at this site would be beneficial as the adjacent treatment was very effective at reducing the mesquite and increasing the amount of and variety of grass species.	2	1	8

Site Notes: Species dominated by burrograss and to a lesser extent black grama. Bush muhly is evident within the mesquite itself. No blue grama or dropseeds observed. Mesquite treatment is recommended. Site is adjacent to a vegetation treatment on mesquite that was very effective- had good recovery of perennial grasses within the treated area.

RFOs Upland and Biotic Standard Assessment Summary Worksheet			
SITE 64050-S EVERETT #2-F189			
Legal Land Desc	SESE 10 0080S 0250E Meridian 23	Acreage	1528
Ecosite	042CY007NM LOAMY SD-3	Photo Taken	Y
Watershed	13060003200 FIVE MILE		
Observers	TRAUTNER & MCGEE	Observation Date	04/01/2010
County Soil Survey	NM644 CHAVES NORTH	Soil Var/Taxad	
Soil Map Unit	HKD	Soil Taxon Name	HOLLOMEX
Texture Class	NM644 L	Soil Phase	HOLLOMEX- GYPSUM LND- ALAMA
Texture Modifier	NM644 LOAM		
Observed Avg Annual Precipitation		Observed Avg Growing Season Precipitation	
NOAA Annual Precipitation		NOAA Growing Season Precipitation	
NOAA Avg Annual Precipitation		NOAA Avg Growing Season Precipitation	
Disturbances and Animal Use:			

Part 2. Attributes and Indicators						
		Departure from Ecological Site Description/Ecological Reference Areas				
Attribute	Indicators	Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
S H	Rills					X
Comments:						
S H	Water Flow Patterns					X
Comments:						
S H	Pedestals and/or Terracettes				X	
Comments:	some pedestalling					
S H	Bare Ground					X

Comments:						
S H	Gullies					X
Comments:						
S	Wind-scoured, Blowouts, and/or Deposition Areas				X	
Comments:	mesquite dunes - scattered					
H	Litter Movement				X	
Comments:						
S H B	Soil Surface Resistance to Erosion					X
Comments:						
S H B	Soil Surface Loss or Degradation					X
Comments:						
H	Plant Community Composition and Distribution Relative to Infiltration and Runoff				X	
Comments:	mesquite present					
S H B	Compaction Layer					X
Comments:						
B	Functional/Structural Groups				X	
Comments:	key shrubs missing					
B	Plant Mortality/Decadence					X
Comments:						
H B	Litter Amount					X
Comments:						
B	Annual Production					X
Comments:						
B	Invasive Plants			X		
Comments:	heavy mesquite presence					
B	Reproductive Capability of Perennial Plants					X
Comments:						
S	Physical/Chemical/Biological Crusts					X
Comments:	biological and physical crust present					
B	Wildlife Habitat					X
Comments:						

B	Wildlife Populations					X
Comments:						
B	Special Status Species Habitat					
Comments:						
B	Special Status Species Populations					
Comments:						

### Part 3. Summary

A. Indicator Summary - Each of the indicators are associated with one or more of the attributes below. An indicator is placed in a category (columns) above and summed for each of the Standard Attributes.

Standard Attribute		Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
S	Soil	0	0	0	2	8
H	Hydrologic	0	0	0	3	8
B	Biotic	0	0	1	1	9

B. Attribute Summary. In this table, the Extreme and Extreme to Moderate columns in the table above are merged for the *Does not Meet* column, Moderate becomes *May Need More Info*, and Slight to Moderate and None to Slight merge to form the *Meets* columns. Values from the table are summarized below. Space is provided for rationale of the determination. This space should most certainly be used when the determination by the ID team conflicts with the summarized values. Provide the sources of information that lead to the determination. X out the appropriate box for each attribute to denote final agreed upon determination by the ID team.

Attribute	Rationale	Does Not Meet	May Need More Info	Meets
Soil		0	0	10
Hydrologic		0	0	11
Biotic		0	1	10

Site Notes: this location is dominated by tobosa, some black grama and burrograss; no other gramas or dropseeds observed. Scattered mesquite at this site, but noted heavy mesquite population in parts of the pasture as well as other areas of the pasture that had been treated in the past.

RFOs Upland and Biotic Standard Assessment Summary Worksheet			
SITE 64050-S EVERETT #3-N012			
Legal Land Desc	NWSW 12 0080S 0250E Meridian 23	Acreage	
Ecosite	042CY017NM BOTTOMLAND SD-3	Photo Taken	Y
Watershed	13060003200 FIVE MILE		
Observers	TRAUTNER & MCGEE	Observation Date	09/02/2010
County Soil Survey	NM644 CHAVES NORTH	Soil Var/Taxad	
Soil Map Unit	GHA	Soil Taxon Name	GLENDAL
Texture Class	NM644 SIL	Soil Phase	GLENDAL- HARKEY
Texture Modifier	NM644 SILT LOAM		
Observed Avg Annual Precipitation		Observed Avg Growing Season Precipitation	
NOAA Annual Precipitation		NOAA Growing Season Precipitation	
NOAA Avg Annual Precipitation		NOAA Avg Growing Season Precipitation	
Disturbances and Animal Use:	No livestock use noted at this time, no trailing indicated		

Part 2. Attributes and Indicators						
		Departure from Ecological Site Description/Ecological Reference Areas				
Attribute	Indicators	Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
S H	Rills					X
Comments:						
S H	Water Flow Patterns					X
Comments:						
S H	Pedestals and/or Terracettes					X
Comments:						
S H	Bare Ground					X
Comments:						
S H	Gullies					X

Comments:						
S	Wind-scoured, Blowouts, and/or Deposition Areas					X
Comments:						
H	Litter Movement					X
Comments:						
S H B	Soil Surface Resistance to Erosion					X
Comments:						
S H B	Soil Surface Loss or Degradation					X
Comments:						
H	Plant Community Composition and Distribution Relative to Infiltration and Runoff					X
Comments:						
S H B	Compaction Layer					X
Comments:						
B	Functional/Structural Groups					X
Comments:						
B	Plant Mortality/Decadence					X
Comments:						
H B	Litter Amount					X
Comments:						
B	Annual Production					X
Comments:						
B	Invasive Plants				X	
Comments:	Salt cedar and mesquite					
B	Reproductive Capability of Perennial Plants					X
Comments:						
S	Physical/Chemical/Biological Crusts					X
Comments:	physical crusts					
B	Wildlife Habitat					X
Comments:						
B	Wildlife Populations					X
Comments:						

B	Special Status Species Habitat					
Comments:						
B	Special Status Species Populations					
Comments:						
<b>Part 3. Summary</b>						
A. Indicator Summary - Each of the indicators are associated with one or more of the attributes below. An indicator is placed in a category (columns) above and summed for each of the Standard Attributes.						
Standard Attribute		Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
S	Soil	0	0	0	0	10
H	Hydrologic	0	0	0	0	11
B	Biotic	0	0	0	1	10
B. Attribute Summary. In this table, the Extreme and Extreme to Moderate columns in the table above are merged for the <i>Does not Meet</i> column, Moderate becomes <i>May Need More Info</i> , and Slight to Moderate and None to Slight merge to form the <i>Meets</i> columns. Values from the table are summarized below. Space is provided for rationale of the determination. This space should most certainly be used when the determination by the ID team conflicts with the summarized values. Provide the sources of information that lead to the determination. X out the appropriate box for each attribute to denote final agreed upon determination by the ID team.						
Attribute	Rationale	Does Not Meet	May Need More Info	Meets		
Soil		0	0	10		
Hydrologic		0	0	11		
Biotic		0	0	11		
Site Notes: Site is dominated by alkali sacaton and vine mesquite, some salt cedar along the river with scattered mesquite. Cattle use is heavy in the spring, but this area looks good in the fall. No change in management is recommended.						

RFOs Upland and Biotic Standard Assessment Summary Worksheet			
SITE 64050-W EVERETT-N011			
Legal Land Desc	NENE 4 0080S 0250E Meridian 23	Acreage	
Ecosite	042CY017NM BOTTOMLAND SD-3	Photo Taken	Y
Watershed	13060005080 MACHO		
Observers	TRAUTNER & MCGEE	Observation Date	04/01/2010
County Soil Survey	NM644 CHAVES NORTH	Soil Var/Taxad	
Soil Map Unit	GHA	Soil Taxon Name	GLENDALÉ
Texture Class	NM644 SIL	Soil Phase	GLENDALÉ- HARKEY
Texture Modifier	NM644 SILT LOAM		
Observed Avg Annual Precipitation		Observed Avg Growing Season Precipitation	
NOAA Annual Precipitation		NOAA Growing Season Precipitation	
NOAA Avg Annual Precipitation		NOAA Avg Growing Season Precipitation	
Disturbances and Animal Use:			

Part 2. Attributes and Indicators						
		Departure from Ecological Site Description/Ecological Reference Areas				
Attribute	Indicators	Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
S H	Rills					X
Comments:						
S H	Water Flow Patterns					X
Comments:						
S H	Pedestals and/or Terracettes			X		
Comments:	pedestals occurring on the grasses.					
S H	Bare Ground				X	
Comments:	esd= 15-20%, actual is estimated at 25%					
S H	Gullies					X

Comments:						
S	Wind-scoured, Blowouts, and/or Deposition Areas				X	
Comments:	deposition around mesquite and grasses					
H	Litter Movement				X	
Comments:	litter in the innerspaces					
S H B	Soil Surface Resistance to Erosion					X
Comments:						
S H B	Soil Surface Loss or Degradation					X
Comments:						
H	Plant Community Composition and Distribution Relative to Infiltration and Runoff				X	
Comments:	mesquite and saltcedar common					
S H B	Compaction Layer					X
Comments:						
B	Functional/Structural Groups		X			
Comments:	lack of desirable shrubs & giant sacaton					
B	Plant Mortality/Decadence					X
Comments:						
H B	Litter Amount			X		
Comments:	esd= 40-50%, actual is 20%					
B	Annual Production			X		
Comments:	esd is> 3000 lbs/acre, estimated to be 1500 lbs/acre here					
B	Invasive Plants		X			
Comments:	mesquite and salt cedar					
B	Reproductive Capability of Perennial Plants					X
Comments:						
S	Physical/Chemical/Biological Crusts					X
Comments:	biological and physical crusts present					
B	Wildlife Habitat					X
Comments:						
B	Wildlife Populations					X
Comments:						

B	Special Status Species Habitat					
Comments:						
B	Special Status Species Populations					
Comments:						

### Part 3. Summary

A. Indicator Summary - Each of the indicators are associated with one or more of the attributes below. An indicator is placed in a category (columns) above and summed for each of the Standard Attributes.

Standard Attribute		Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
S	Soil	0	0	1	2	7
H	Hydrologic	0	0	2	3	6
B	Biotic	0	2	2	0	7

B. Attribute Summary. In this table, the Extreme and Extreme to Moderate columns in the table above are merged for the *Does not Meet* column, Moderate becomes *May Need More Info*, and Slight to Moderate and None to Slight merge to form the *Meets* columns. Values from the table are summarized below. Space is provided for rationale of the determination. This space should most certainly be used when the determination by the ID team conflicts with the summarized values. Provide the sources of information that lead to the determination. X out the appropriate box for each attribute to denote final agreed upon determination by the ID team.

Attribute	Rationale	Does Not Meet	May Need More Info	Meets
Soil		0	1	9
Hydrologic		0	2	9
Biotic	This site is heavily influenced by the amount of salt cedar and mesquite. These two invasive species have out-competed the native grasses, such as giant sacaton for the available soil moisture and this location reflects that. Livestock grazing does not appear to be a factor at this location.	2	2	7

Site Notes: A decrease in giant sacaton has occurred due to decrease in soil moisture, salt cedar is present but is stressed. One single giant sacaton in heavy woody litter (salt cedar), predominately alkali sacaton and small bunch grasses. This location is a mixture of a Bottomland SD-3 and a Sandy SD-3, and the vegetation reflects that. It leans more toward the Bottomland SD-3 features, but the major factor here is the level of salt cedar and its influence.

# **Determination of Public Land (Rangeland) Health for 64050 MILNER LAKE**

The Record of Decision (ROD) for the New Mexico Standard for Public Land Health and Guidelines for Livestock Grazing management (dated January 2001) adopted three Standards for Public Land Health. These are (1) Upland Sites Standard, (2) Biotic Communities, including Native, Threatened, Endangered, and Special Status Species Standard and (3) Riparian Sites Standard.

The ROD also established a process for the BLM Field Offices for implementation. Through a public participation process, the Roswell Field Office developed and adopted indicators to use in conjunction with existing monitoring data to assess these standards.

Field assessment worksheets and other available data that evaluate the local indicators were completed for this allotment. Based on these assessments, it is my determination that public land within Milner Lake, allotment 64050, meets the (1) Upland Sites Standard and (2) Biotic Communities, including Native, Threatened, Endangered, and Special Status Species Standard. There are no public land Riparian areas on this allotment, therefore this standard was not addressed.

/s/ J. Howard Parman  
Assistant Field Manager

09/24/2010  
Date